



BULLETIN

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DIRECTOR'S COLUMN

Henry L. Green

Codes... Now and for the Future

On July 31, 2001, the State of Michigan enacted a new set of construction standards that regulate the construction from the farthest northern port to our southern borders and from the eastern shoreline to the western waters of Lake Michigan. With these codes comes the opportunity to put to rest the illusion that construction is different in the various parts of our state. Michigan has long held an excellent reputation for building safety. We have used this history to develop codes that will further our record into the future.

Some have argued that construction standards need to be different to respond to local conditions and needs. Some have argued that codes developed by a state agency could not address the uniqueness of small communities and the complexity of a large metropolis.

By using our history and learning from our best practices, engaging local code officials, contractors, suppliers and others, we have been able to develop a code that is responsive to the needs of all building types. From a single-family residential structure to high-rise buildings, the codes provide the necessary regulations to assure public safety and to be responsive to the concerns for cost effectiveness.

(Continued on Page 2)

Bureau Reorganization

*by Beth Aben
Executive Assistant*

The bureau has reorganized effective October 1, 2001.

The reorganization streamlines functions in an effort to provide more efficient and effective service. The bureau expects services to continue uninterrupted; however, you may be dealing with a new face or voice along the way.

The bureau has established a new Office of Administrative Services. This office is responsible for personnel actions, promulgation of administrative rules, publications, forms, technical bulletins, web production, media coordination, duties related to the Americans with Disabilities Act and the Good Moral Character Act, and development of bureau procedures. The Office of Administrative Services' telephone number is 517/241-9302.

The Bureau has also established a new Building Division. This division has enforcement responsibility for the state building code and also provides building inspections for manufactured housing communities. The Building Division's telephone number is 517/241-9317.

The Office of Management Services has been expanded to include oversight responsibility for the Remonumentation Grant Program and continues responsibility for budget, internal controls, performance reporting, document management, permitting, license renewal, and Freedom of Information requests. The Office of Management Services' telephone number is 517/241-9313.

The Office of Local Government and Consumer Services has been expanded to include responsibilities for manufactured housing audits, complaint investigation, enforcement of administrative action relative to these functions as well as responsibility to review ordinances for manufactured housing communities. This office continues responsibility for investigation of consumer licensing complaints, performance evaluations of local units of government, applications and ordinances for approval to administer and enforce construction codes locally, registration of construction code inspectors, and approval of training programs for code inspectors. The Office of Local Government and Consumer Services' telephone number is 517/241-9347.

The Plan Review Division has been expanded to include plan reviews for manufactured housing communities. The office continues responsibility for review of building, electrical, mechanical, and plumbing plan reviews and all barrier free design exception requests and Barrier Free Design Board responsibilities. In addition, the division continues responsibility to review premanufactured plans and compliance assurance manuals. Questions relative to barrier free design should be directed to 517/241-9300. All other questions should be directed to 517/241-9328.



"Serving Michigan... Serving You"

Director's Column, continued...

The lessons learned in this historic effort are many. We can develop codes that meet the needs of small rural communities yet address the complexity of large cities. The responsiveness of the codes will be measured over the next several years. When we find issues that require attention, we will make the necessary adjustments. We can learn new lessons by putting into practice these codes as they are intended and as written.

To preserve the built environment for the future, we must apply the codes today.

Holiday Closings

State offices will be closed in observance of the following holidays:

November 12 - Veterans Day
November 22 & 23 - Thanksgiving
December 24 & 25 - Christmas
December 31 & January 1 - New Years
January 21 - Martin Luther King, Jr. Day

The BULLETIN is a quarterly publication of the Bureau of Construction Codes within the Michigan Department of Consumer & Industry Services. The BULLETIN is published for the information of the 60,000 plumbers, electricians, mechanical contractors, boiler and elevator licensees, plan reviewers, building officials, inspector registrants, manufactured home communities, installer/servicers, and retailers throughout the state.

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Electrical Power Sources

by Stella L. Morris, Chief
Electrical Division

Over the past several months, questions have arisen regarding the interpretation relative to providing "a reliable source of power" to a fire pump in a building served from a customer owned primary distribution system. Article 695 – Fire Pumps of the 1999 Michigan Electrical Code (Part 8 Rules incorporating the 1999 National Electrical Code) covers the installation of electrical power sources.

By reference in Article 695 of the 1999 MEC, certain criteria are set forth in Section 6-2.3 of the 1996 NFPA 20 for "a reliable source of power." However, in accordance with Section 6-2.3, determination of a reliable power source rests with "the authority having jurisdiction." The Electrical Division under the authority of the Bureau of Construction Codes cites Section 695-3 and the criteria set forth in Section 6-2.3 in its determination of a reliable source of power.

The 1999 Michigan Electrical Code (MEC) recognizes a utility service connection as a reliable source of power. Therefore, it is the intent of Article 695 of the 1999 MEC and the 1996 NFPA 20 to require a separate service disconnecting means (primary switch) and dedicated transformer (secondary) where the service or system voltage is different from the utilization voltage of the fire pumps motor. This requirement is to ensure the operation of the fire pump in the event of a disconnection of the service to the building. This requirement may be exempt in campus-style arrangements.

Questions regarding this requirement may be directed to the Electrical Division at 517/241-9320.

Bureau Office Hours

The Bureau of Construction Codes' Okemos office is open for customer service 8:00 a.m. - 5:00 p.m. Monday through Friday, with the exception of designated holidays. The bureau remains open during the noon hour. The office is located at 2501 Woodlake Circle, Okemos.

Inspector Training Programs

by Scott D. Fisher
Office of Local Government and Consumer Services

The Bureau will again be conducting training programs at the MacMullan Conference Center, Higgins Lake for building, electrical, mechanical, and plumbing inspectors. The following dates have been scheduled for 2002, however, those seminars attended **after** September 16, 2002, **will not** be credited toward the 1999–2002 registration cycle.

Building Inspector Training Program (Two Week Program) NO VACANCIES

1st week - December 3 - 7, 2001

2nd week - January 28 - February 1, 2002

Electrical Inspector Training Programs February 25 - 27, 2002 **NO VACANCIES** October 7 - 9, 2002

Mechanical Inspector Training Programs

March 18 - 20, 2002

September 18 - 20, 2002

Plumbing Inspector Training Programs

February 6 - 8, 2002

October 21 - 23, 2002

Building Inspector Training Program (Two Week Program)

1st week - December 2 - 6, 2002

2nd week - January 27 - 31, 2003

These programs will be available to inspectors with all levels of experience. Agendas are not yet available, but generally consist of administrative, communication, specialty, technical, and in some cases, plan review hours.

We are only able to accommodate 35 individuals for each seminar. Therefore, if you are interested in attending any of these programs, please contact Evie Livingston at (517) 241-9347, as soon as possible, to reserve a place for the seminar of your choice. If the seminar you wish to attend is full, your name will be placed on a waiting list. As the scheduled dates approach, we will confirm your reservation, and you will be provided an agenda and payment information.

Old Time Steam Powered Equipment and Tractors

by Robert J. Aben, Jr., Chief
Boiler Division

On July 29, 2001, an antique traction boiler exploded at a fair in Medina, Ohio killing 5 and injuring 48. Our thoughts are with those affected by this tragedy.

Michigan has many events during the year where similar types of equipment are on display for public view. Steam powered tractors, portable boilers for operating thrashers, saw mills and other equipment, even the old Stanley Steamer cruises around the fair grounds sometimes carrying passengers.

In an effort to assure the safety of this equipment for operation, the Michigan Boiler Law requires any boiler, whether it is stationary or mobile like a tractor, to be inspected and registered with the state before it is operated. After the initial inspection, all antique boilers must receive additional inspections and a hydrostatic test every three years to maintain an operating certificate. Individuals licensed by the Boiler Division must perform certain repairs, especially those involving welding.

It is for the safety of all that Michigan Boiler Law requires inspection and registration of these old time steam powered equipment and tractors.

Questions may be directed to the Boiler Division at 517/241-9334.

Land Surveyor Vacancy

The bureau has been recruiting candidates for a Land Surveyor 9/10/11 position within the Manufactured Housing and Subdivision Control Division. The position is responsible to review proposed land subdivisions for surveying and legal accuracy and compliance with the Land Division Act and related rules. The hourly salary range for this position is \$14.71-\$24.02.

The majority of applicants for this position have not possessed the required degree to qualify for the position. There is no experience required for the entry level; however, an individual must possess a Bachelor's Degree with a major in surveying. If you meet this qualification and are interested in the Land Surveyor position, please contact Maynard Dyer at 517/241-6319.

Scheduled Board Meetings

MEETING	DATE	TIME	LOCATION
State Plumbing Board	Dec. 4	10:00 a.m.	Okemos-Conf. Room 2
Board of Boiler Rules	Dec. 11	9:30 a.m.	Okemos-Conf. Room 2
Manufactured Housing Commission	Dec. 12	10:00 a.m.	Mercantile Way, Ste. 7
Electrical Administrative Board	Dec. 21	9:30 a.m.	Okemos-Conf. Room 1
Construction Code Commission	Jan. 9	9:30 a.m.	Okemos-Conf. Room 3
Barrier Free Design Board	Jan. 11	9:30 a.m.	Okemos-Conf. Room 1
State Plumbing Board	Jan. 16	10:00 a.m.	Okemos-Conf. Room 2
Manufactured Housing Commission	Jan. 30	10:00 a.m.	Okemos-Conf. Room 3

Okemos - 2501 Woodlake Circle, Okemos
Mercantile Way, Ste. 7 - 6545 Mercantile Way, Lansing

Please Note: All board meeting dates are not yet finalized for 2002. Refer to the Bureau's web site at www.cis.state.mi.us/bcc for additional information as it becomes available.

License Exam Schedule

EXAM	DATE	LOCATION	DEADLINE
Elevator Journeyman Exam	Jan. 16	Okemos	Dec. 28

Dates and locations are subject to change.

Please Note: All licensing examination dates are not yet finalized for 2002. Refer to the Bureau's web site at www.cis.state.mi.us/bcc for additional information as it becomes available.

Special Configuration Stack Fitting

by Robert G. Konyndyk, Chief
Plumbing Division

The Plumbing Division has recently published Technical Bulletin #38 to resolve many questions regarding the use of special stack fittings with enlarged chambers.

Fixtures connected on a soil require individual venting or use of one of the methods referenced in the 2000 Michigan Plumbing Code or 2000 Michigan Residential Code. Special configuration fittings have been accepted in the past and referenced in the plumbing code. The 1990 rules, R408.30744f identified these applications as stack venting and stated that "when special stack fittings that has individual branches is installed, the branches are considered as discharging into the stack at the same level." Rule 408.30746 of the same edition required compliance with the other waste and venting criteria and stated, "the inverts of the auxiliary opening of the special stack fittings shall be above the centerline of the major horizontal opening." It is extremely important to understand that the fitting shall have an enlarged chamber and the branches are within the required distance. The enlarged chamber protects the fixture trap seals by allowing the air from a vented connected branch to circulate and reach the other branches connected to the special fitting. Other fittings having multiple openings would require that all branch connections be individually vented.

Technical bulletins are available on the bureau's web site at www.cis.state.mi.us/bcc for greater detail.

Questions regarding this requirement may be directed to the Plumbing Division at 517/241-9330.

Load Determination for Truss Design for the Michigan Residential Code

by Irvin J. Poke, Chief
Plan Review Division

Residential roof/ceiling systems under the Michigan Residential Code (MRC) are required to be designed based on the snow loads per Figure R301.2(5), the wind speed per Table R301.2(1), seismic requirements per section R301.2.2, and the attic loads per Table R301.4. When the roof/ceiling system consists of wood trusses, they are required to be designed in accordance with accepted engineering practice per Section R802.10.2. The accepted engineering practice cited is the ANSI/TPI 1 standard published by the Truss Plate Institute. The accepted practice for determining the design loads is the ASCE7-98 standard published by the American Society of Civil Engineers as identified in the Michigan Building Code (MBC) sections 1605, 1608, 1609, 1612 and 1619.

The building designer must provide to the truss designer the appropriate ground snow load, wind speed, seismic load, attic load, site exposure, and importance category. The exposure and importance categories are found in the MBC Chapter 16 or the ASCE7-98 standard. Proper identification of the exposure and importance categories is critical to the structural design of the trusses. The building official issuing the permit should verify that the correct loads and categories are identified for the specific site.

The truss manufacturer must use the identified design loads in a series of computations that consider the exposure, importance, roof slope and thermal factors for uniformly distributed and concentrated loads. The analysis is repeated for unbalanced and drift loads. The analysis producing the highest live load requirements will be the basis of the truss design. It should be noted that the actual design live load may exceed the ground snow loads. The construction documents that are submitted to the building official should document the design factors used, and truss design drawings shall contain the information required by MRC, Section R802.10.1. All construction documents are subject to the requirements for professional services in accordance with MRC section

R106.1 and MBC section 106.1.

This discussion has centered on the MRC. However, the design methodology is the same for non-residential structures, and is detailed in chapter 16 of the MBC. ***It is critical to understand that the design methodology of multiplying the ground snow load by 0.7 for the design live load is no longer valid.***

Questions regarding truss designs may be directed to the Plan Review Division at 517/241-9328.

Bureau Training February 12 - 14, 2002

The bureau will be conducting annual training for management and inspection personnel February 12-14, 2002. Administrative support staff will be in the office and available to answer questions and take messages. Management staff will be in contact with the office on a daily basis. Any call which warrants immediate attention will be returned. If possible, please work with inspection staff to arrange inspections before or after the training seminar.

Still Receiving Duplicate Issues?

For those who contacted the bureau and indicated you are receiving duplicate mailings of this newsletter, thank you. If you have not already done so, please contact the BCC Bulletin editor in writing or by e-mail at bccinfo@cis.state.mi.us to report any duplicate mailings of this newsletter. Please provide each license number or registration number you hold and the address as it appears on each mailing label. Indicate which license/registration you prefer used for mailing purposes.

If you prefer to download a copy from the bureau's web site at www.cis.state.mi.us/bcc and have your name removed from the mailing list completely, please notify the editor as listed above.

Thank you in this effort to make the printing and mailing of the BCC Bulletin more cost effective.

Attention All Registered Code Officials

by Scott D. Fisher
Office of Local Government and Consumer
Services

We are now in the final year of the 1999 – 2002 (Cycle 1) registration cycle. You should be reviewing your education credits to assure completion of the required educational hours for renewal of your registration by September 16, 2002. All required education hours must be completed by that date. **There will be no extra time allowed at the end of the current code cycle to complete required training.**

By now you should have received your credit statements which were mailed in September 2001. If you have questions about your education record or believe there is an error on your credit statement, please provide, **in writing**, the program approval number, program title, and date of attendance, as well as any other information you may feel is relevant. The new address of the Office of Local Government and Consumer Services is P.O. Box 30222, Lansing, MI 48909.

Find us at www.cis.state.mi.us/bcc

Boiler and Electrical License Renewals

All boiler licenses and many of the electrical license classifications expire December 31, 2001. Renewal applications were mailed in October. Be sure to complete all appropriate sections, **sign your renewal application**, and return the renewal application to this office with the appropriate license renewal fee. Failure to sign your renewal application, remit proper payment or to complete necessary information will delay the renewal of your license. To assure you receive your 2002 license in a timely manner, please return your renewal application early.

Questions relative to boiler license renewals should be directed to the Boiler Division at 517/241-9334. Questions relative to electrical license renewals should be directed to the Office of Management Services at 517/241-9313.

Elevator Inspector Requirements

by Cal Rogler, Chief
Elevator Division

The Elevator Safety Division has had several calls regarding the requirements necessary for becoming an elevator inspector. There have been occasions that applicants interested in filling certain vacant inspector positions have met the six years of experience required to become an inspector, however, they were unable to apply because they lacked a general elevator certificate of competency. By the time they tested for and received their general certificate of competency the position they desired was filled. Most of the applicants were unaware of these requirements. In an attempt to assist those that may desire to apply for a position as an elevator inspector we submit the following information.

Applicants for a general certificate of competency shall submit to the department a completed application form and meet the following requirements:

- Three years of experience in elevator construction.
- Provide two written references.
- Pass a two part examination, consisting of a written portion with multiple-choice questions and an oral portion. A score of 70 percent is required to pass.

The exam is given at regularly scheduled Elevator Safety Board meetings. Applicants may prepare for the exam by studying the Michigan Elevator Laws and Rules; the ASME A17.1-1993 and ASME A17.1a-1994 Addenda, Safety Code for Elevators and Escalators; Act 227 of the Public Acts of 1967; Act 333 of the Public Acts of 1976; the 1996 National Electrical Code, Article 620; ANSI/ASME A90.1-1885, Safety Standards for Belt Manlifts; and the ANSI A10.4-1981, Safety Requirements for Personal Hoists.

Unlike other elevator licenses the general certificate of competency is permanent and does not need to be renewed. When inspector positions become vacant, applicants that meet the

required six years of experience and have a general certificate of competency, would be allowed to compete for those positions.

In closing, you may obtain your certificate of competency anytime after completing three years of experience in elevator construction. However, to be considered for a position as a state of Michigan elevator inspector you must have six years of experience.

Survey and Remonumentation Program

by Richard VanderMolen, Chief
Manufactured Housing and Subdivision Control Division

The Michigan Department of Consumer and Industry Services (CIS)/Bureau of Construction Codes (BCC) administers the survey and remonumentation grant program that was established legislatively in 1990. BCC is charged with the administration of the statewide effort to preserve, maintain and re-establish the original property corners. Originally established in the 1800's to identify and enable land to be sold in the Michigan Territory, the approximately 300,000 corners remain the basis of all property identification in the state today. The cement and steel marker monuments are generally set in half-mile intervals across the state in east-to-west and north-to-south directions.

In December 1990, the Legislature passed and the Governor signed into law the State Survey and Remonumentation Act (P.A. 345 of 1990) that provided for the remonumentation of the original United States public land survey corners that serve as the basis for all public and private property locations in Michigan. Act 345 and Act 346, a companion act that authorized the collection of fee revenue to fund the program, became effective on January 1, 1991. In 1993, the Department made the first grants and each of Michigan's 83 counties received a grant.

Act 345 created the Survey and Remonumentation Commission within the former Department of Commerce. The Department is charged with the responsibility of coordinating "the

restoration, maintenance, and the preservation of the land survey records of vertical and horizontal monuments, the public land survey system, and the property controlling corners established by the United States public land survey and by the national geodetic survey within this state..."

Executive Order 1996-2 transferred the statutory authority, powers, duties, functions and responsibilities of the Commission to the Director of the Department of Consumer & Industry Services by a Type II transfer. The authority, powers, duties, functions and responsibilities of the Executive Director of the Survey and Remonumentation Commission were transferred to the Director of the Department of Consumer & Industry Services by a Type III transfer, eliminating the Commission's Executive Director. Executive Order 1997-13 eliminated the Survey and Remonumentation Commission effective October 1, 1997.

P.A. 5 of 1998 amended Act 345 to allow for county-expedited programs whereby a county could prefund its program and recover expenditures over time by being reimbursed by future grants, if any. An expedited remonumentation program must be adopted by the county board of commissioners consistent with provisions of the State Survey and Remonumentation Act. An expedited program must be designed to complete and result in the complete monumentation and remonumentation of the entire county within a period of 19 years or less from the date the original county plan was first approved by the State Survey and Remonumentation Commission.

Included in the Department of Consumer & Industry Services/Bureau of Construction Codes' 2001/2002 budget is \$6 million for grants to preserve Michigan's public land records and corners. All 83 counties are anticipated to participate. To be eligible for a grant, the county submits an annual grant application and proposed work program. CIS/BCC reviews and approves the documents and makes funding recommendations with a formula based on the county's land area and amount of funds collected by the county.

Mechanical Inspector Registration How Do I Qualify?

by *Tennison B. Barry, Chief
Mechanical Division*

There are two factors considered when an application for mechanical inspector is reviewed. (1) Does the individual have 4 years experience in Hydronic Heating and Process Piping and or HVAC? Act 54 rules requires a person to have 4 years experience in the work classifications as listed above, to be registered as a mechanical inspector. (2) Does the individual possess 2 years of experience at the journey level or above? The journey level means an experienced level which would enable a person to work independently. A person who has over 4 years experience in the mechanical field but does not possess the experience as prescribed in the registration rules will not be approved.

When an application for mechanical inspector registration is reviewed a search is conducted to verify the applicant holds a mechanical contractor license. If the candidate holds a license and it is in the proper classification, the candidate is approved. If a person does not possess a license in Hydronic Heating and Processed Piping or HVAC the application is reviewed to determine if the applicant has the proper experience as required by the registration rules. Employment information is also verified.

On a related note: When seeking registration as a plumbing inspector it is important to include all experience in the mechanical field also. If, at a later date, application is made for registration as a mechanical inspector the original applications for plumbing license and plumbing inspector registration will again be reviewed. If there are conflicts between the two registration applications further documentation will be required. When applying for any license or inspector registration provide thorough correspondence.

Change of Address?

If you have recently moved or are planning to move in the future, be sure to contact the appropriate licensing program or inspector registration program for the proper procedure when reporting your address change. Unless your move occurs simultaneously with the renewal of your license or inspector registration do not intentionally wait until the license/inspector registration renewal period. This may result in your renewal application as well as other correspondence being incorrectly addressed and possibly being returned from the post office.

If the address listed on your copy of the BCC Bulletin is incorrect, then the address on your license or inspector registration certificate is also incorrect. Address files for the mailing of the BCC Bulletin are taken from each division's licensing files, the inspector registration file, and premanufacturers and inspection agency files. Address labels for each county, city, village, or township clerk are obtained from the Michigan Municipal League, Michigan Association of Counties, or Michigan Township Association. Incorrect addresses should be reported to the appropriate agency. Please verify the address on the BCC Bulletin is correct.

Reciprocal Electrical Contractor Licensees

Electrical contractor and fire alarm contractor license renewal applications were mailed in October for all reciprocal licensees. A Construction Lien Fund Membership card was enclosed with the renewal application. This membership card **must be** completed and returned to the appropriate address with the \$50.00 membership fee **before** your state electrical license may be issued. Failure to remit payment for the Construction Lien Fund will delay the renewal process of your electrical contractor license.

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